

**Notice of Allowability**

Application No.

10/612,161

Examiner

Tuan T. Nguyen

Applicant(s)

COVILLE ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_.
2. ☒ The allowed claim(s) is/are 1-26.
3. ☒ The drawings filed on 01 July 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some c) ☐ None of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 2/23/04, 12/15/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other Attachment A: Search History.

RICHARD ELMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 2/23/04 and 12/15/03 were filed after the mailing date of the present application. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### **EXAMINER'S AMENDMENT**

2. The application has been amended as follows:

Claim 1, line 8, change "conducting" to -- conductive --

Claim 2, line 1, change "RAM" to -- re-writable --

Claim 24, line 8, change "conducting" to -- conductive --

3. Claims 1-26 are allowed.

4. The following is an examiner's statement of reasons for allowance:

The prior art of record fail to disclose a re-writable memory comprising, in combination with other cited limitations, a plurality of memory cell arrays, each one defined in-between an x-direction conductive layer and a y-direction conductive layer, each memory cell array being accessible for reading or writing through selection of an x-direction conductive layer operably connected to the memory cell array; and a y-direction conductive layer operably connected to the memory cell array; wherein the selection of only one conductive layer is not sufficient to access a memory cell array for either reading or writing as recited in claims 1-9.

The prior art of record also fail to disclose a re-writable memory comprising, in combination with other cited limitations, a plurality of driver sets that drive the conductive line

arrays, each driver set using a selection logic to drive the conductive line arrays, wherein at least two conductive line arrays are driven by the same selection logic; and a plurality of memory cell arrays, each memory cell array being in electrical contact with two conductive line arrays and requiring both of those conductive line arrays to be driven by their appropriate driver sets in order to access the memory cell array for reading and writing purposes, whereby a memory cell array cannot be read from or written to by a single conductive line array being driven as recited in claims 10-17.

The prior art of record further fail to disclose a re-writable memory comprising, in combination with other cited limitations, at least three x-direction conductive layers, each conductive layer being patterned to form conductive array lines in a first direction, wherein at least two x-direction conductive layers are driven by the same logic; at least two y-direction conductive layers, each conductive layer being patterned to form conductive array lines in a second direction orthogonal to the first direction; at least four memory cell arrays, each memory cell array being operably connected to one x-direction conductive layer and one y-direction conductive layer as recited in claims 18-23.

The prior art of record also fail to teach a re-writable memory comprising, in combination with other cited limitations, a plurality of memory cell arrays, each one defined in-between an x-direction conductive layer and a y-direction conductive layer, each memory cell array being accessible for reading or writing through selection of an x-direction conductive layer operably connected to the memory cell array; and a y-direction conductive layer operably connected to the memory cell array, wherein each memory cell is defined by at least a memory plug placed at or

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near the intersection of one x-direction conductive array line and one y-direction conductive array line as recited in claims 24-26.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Nguyen whose telephone number is (571) 272-1880. The examiner can normally be reached on Mon-Thu-Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 1, 2004



Tuan T. Nguyen  
Patent Examiner  
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